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Pattern and Types of Disability among Students in Schools for Special Needs in Resource Limited Setting of Africa

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ABSTRACT

Introduction: Out of the 20 million people living with disabilities in Nigeria, 1.3 million are children, and merely 14% of this demographic are currently enrolled in schools. The Schools for special needs are specifically designed, resourced and staffed to cater to children with learning difficulties, physical disabilities, and intellectual problems. To achieve this, matching type of disability with the type of educational resources available at the school of special needs is important. The study assessed the disability types and patterns among students in schools for special needs in north central Nigeria. **Methods:** A cross-sectional study was done among 500 students attending schools of special needs in the north-central states of Nigeria. The participants were selected using a multistage sampling technique. Quantitative datwereas collected using an interviewer-administered pre-tested questionnaire. Statistical Package for Social Sciences (SPSS) version 23.0 was used to analyze the data. Descriptive statistics of frequency counts and percentages were used while inferential statistics of Chi-square, Student's t-test and regression analysis were used to test the formulated hypothesis; the level of significance was set at a p-value of less than 0.05 at a 95% confidence level. **Results:** Hearing impairment was the most commonly occurring disability among the students (330/500, 66.0%) while learning impairment (63/500, 12.6%) was the least occurring disability. Forty-two (8.4%) students had multiple disabilities. More than half 275 (55.5%) of the respondents had been disabled from birth while more than three quarters 397 (79.4%) of the respondents had a family history of disability. **Conclusion:** In the schools for special needs in North Central Nigeria, students have hearing, visual, learning and multiple disabilities while hearing impairment was the commonest form of disability among the students. Government should establish more schools for special needs. This study will provide learning opportunities for many of the disabled that are denied education.

Keywords: Children with Special Needs; North Central Nigeria; Pattern of Disability

INTRODUCTION

Nearly 200 million people have significant functional challenges as a result of being born with or developing a disability, resulting in certain special requirements (World Health Organization, 2011), while approximately four in five hundred children live with a disability in developing countries (Amar, 2008). There are no geographical or societal boundaries, gender restrictions, or socioeconomic restrictions on the prevalence of disability, so people with disabilities can be found anywhere on the globe with a variety of socioeconomic statuses. In terms of education, rehabilitation, and other support services, industrialized nations pay special attention to people with disabilities. Similar to other resource-limited settings, children with disabilities are one

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sector in Nigeria's educational system that has not received much attention (Oyetunde, 2004). The special qualities of these kids make it impossible for the ordinary school to provide for them adequately and satisfactorily. The prevalence of disability is rising globally. This is due to the inferior educational achievements of children with disabilities (World Health Organization, 2011).

Even when two people have the same type of handicap, it can still have a variety of effects on them. Disabilities come in a wide variety of forms and can affect a person's thinking, learning, movement, mental health, memory, communication, and social connections, among other things (Eskay, Eskay, & Uma, 2012). The International Classification of Functioning, Disability, and Health, or ICF for short, is a classification of the health-related components of functioning and impairment that categorizes disability into eight different types (Kostanjsek, 2011).

Physical limitations and mobility issues encompass physical limitations such as lower limb impairment, upper limb impairment, manual dexterity impairment, and impairment in coordination with various body organs, whereas mobility impairment can be either a congenital or acquired issue. Eye injuries and other serious vision impairments, ranging in severity from slight to severe, can cause a number of serious issues or diseases, including blindness (Kostanjsek, 2011; Saleeby, 2016). People with hearing disabilities may be entirely or partially deaf; those who are partially deaf frequently wear hearing devices to help them hear. However, sign language is a form of communication for the deaf; Dyslexia sufferers and those with other learning disabilities, such as those with speech issues, may have cognitive or learning disabilities (Saleeby, 2016).

One of the most marginalized groups in our society, people with disabilities deal with a variety of difficulties. The representation of disabled people in politics, the workforce, and economic planning is extremely low. Health care is also out of reach for them. A key obstacle to accessing health care is the absence of suitable services for those with impairments. The biggest challenges to achieving equality of opportunity and social inclusion include attitudes that lead to stigmatization and discrimination, deprive individuals with disabilities of their dignity, and prevent them from realizing their full potential (Kostanjsek, 2011).

Children with special needs often experience more challenges than ordinary kids because they may be born with a syndrome, a terminal illness, severe cognitive impairment, or significant psychological problems. In addition, they may experience panic attacks, food allergies, learning difficulties, developmental delays, or other special needs (Carvill, 2001; Saleeby, 2016). To reach their full academic, social, and emotional potential, these kids will need more help and extra resources. More specifically, mothers of children with ID displayed lower physical health, impairment in social relationships, in their psychological status and poorer perceptionoftheirenvironment (Hasan & Muhammad, 2018). Additionally, they could require ongoing counseling and assistance in navigating life's challenges (D'Angelo *et al*., 2020). In America, 18.5% of children under the age of 18 have special needs. This is not to say that they are not intelligent, bright, or capable; rather, it only means that they experience unique difficulties that a typical student would not (Algood, Harris, & Hong, 2013).

The following categories are used to categorize children with exceptional needs: physical (epilepsy, multiple sclerosis, chronic asthma, and muscular dystrophy in children); developmental (down syndrome, autism, dyslexia, and processing issues in children); Behavioural/Emotional (young people with ADHD, bipolar disorder, and obstructive behavioral disorder); and Sensory Impaired (children that are blind, visually impaired, deaf, or have limited hearing) (Algood, Harris, & Hong, 2013).

They are the most marginalized and excluded groups in society; as a result of daily prejudice brought on by unfavorable views and a lack of suitable laws and regulations, they are essentially prevented from exercising their legal entitlements to healthcare, education, and even basic survival (Stein *et al.*, 2006).

The International Children's Emergency Fund of the United Nations estimates that there are at least 93 million disabled children globally. These kids are frequently among the most disadvantaged people in society, which makes it less likely that they will go to school, have access to healthcare, or have their opinions heard. Additionally, because of their impairments, they are more likely to experience physical abuse and are frequently

denied access to adequate nutrition and humanitarian aid in times of crisis.

The need for this study in Nigeria stems from the importance of knowing the pattern and type of disabilities that children with special needs have in order to inform policy changes and help the children acceptably integrate into society. This study sought to determine the types and patterns of disability among children attending special needs schools in north-central Nigeria.

METHODOLOGY

One of Nigeria's six geopolitical zones, the North Central region is made up of six states and the Federal Capital Territory. The region is located near the meeting point of the rivers Niger and Benue, running roughly from west to east. In north-central Nigeria, there are reportedly two thousand students attending public special needs schools in eighteen schools. The North Central Nigerian special needs schools have a free education policy that covers the students' lodging, meals, and transportation. A few day students attend both primary and secondary education at the schools, which operate on a boarding basis and contain both primary and secondary sections.

The study was a cross-sectional investigation of disabled kids in north-central Nigeria who attended special needs schools. 500 respondents were chosen for the study using a multistage sampling procedure. Government Special School, Kwara State School for Special Needs in Ilorin, F.C.T. UBE School for the Deaf in Kuje, F.C.T. School for Children with Special Needs in Kuje, and F.C.T. School for the Blind Children in Garki were all investigated. From the aforementioned schools, 156, 71, 180, 62, and 31 students were interviewed, respectively. Students who did not wish to participate and those who were critically ill at the time of the study were exempted from the study.

A pretested, semi-structured interviewer-administered questionnaire was used to gather quantitative data from eligible respondents. This was structured into four sections: socio-demography, disability types and patterns, duration of disability, and family disability history. The tools were face-validated, after which appropriate amendments were made where necessary. About eighteen research assistants were hired and instructed on the use of the research instruments as well as data collection techniques for this study.

The principles of informed consent and the right to privacy were preserved. Respondents under the age of 18 were required to provide written parental or guardian consent and assent, while those who were 18 years of age or older provided informed consent prior to the delivery of the questionnaire after receiving thorough counseling. The principle of informed consent and the right to privacy were observed after they had been fully counseled. The researcher carefully examined the data for potential errors and missing data before entering it into IBM's SPSS version 23.0, a statistical program for social sciences. Using the source questionnaire, the extreme numbers brought about by incorrect entries and omissions were adjusted. Descriptive statistics were used to examine the quantitative data, such as frequency counts and percentages, while inferential statistics, such as Chi-square, Student's t-test, and regression analysis, were used to test the formulated hypothesis. Significant results were defined as p-values <0.05 in this study, which had a 95% confidence interval.

Ethics Consideration

The study was ethically approved by the Ethical Review Committee of the University of Ilorin Teaching Hospital , Nigeria on 21st February, 2019 with approval number ERC PAN/2019/02/1879

RESULTS

The responses ranged in age from 12 years old to 39 years old, with a mean age of 16.4±3.5 years. More people responded to JS1-3 (225; 45.0%) than primary 4 (134; 26.8%). With a slight male preponderance of 270 (54.0%), there were more respondents of the Muslim faith (275, or 55.0%) and Yoruba ethnicity (186, or 37.2%). The average length of time spent in school was 7.6±2.9 years, with 15 years being the longest and 3 years being the shortest (Table 1).

Table 1: Demographic Characteristics of Respondents

Socio-demography	Frequency	(%)	(N=500)
Age group			
12-14	208	(41.6)	
15-16	254	(50.8)	
17-18	25	(5.0)	
>18	13	(2.6)	
Gender			
Male	270	(54.0)	
Female	230	(46.0)	
Class			
PRY1-3	33	(6.6)	
PRY4-6	134	(26.8)	
JS1-3	225	(45.0)	
SS1-3	108	(21.6)	
Religion			
Islam	275	(55.0)	
Christianity	180	(36.0)	
Traditional	45	(9.0)	
Ethnic group			
Hausa	162	(32.4)	
Yoruba	186	(37.2)	
Ibo	74	(14.8)	
Others	78	(15.6)	
Length of Stay in School(years)			
<5	42	(8.4)	
5-10	332	(66.4)	
>10	126	(25.2)	

Hearing impairment was the most common disability among the responders, accounting for 330 (66.0%), followed by learning impairment at 98 (19.6%), and vision impairment at 72 (14.4%). More than one impairment was present in up to 8.4% of the respondents. Of the responders with various disabilities, physical deformities affected more than half (24) (57.2%) of them. Of these, 17 (40.5%) had a learning disability (Table 2; Figure 1), and only 2 (4.8%) people with Down syndrome and vision impairment due to physical deformities also had a learning impairment. Hearing impairment is the commonest impairment in the three sites of FCT180 (65.9%), Kwara (75.6%), and Nasarawa (38.0%) (Table 3).

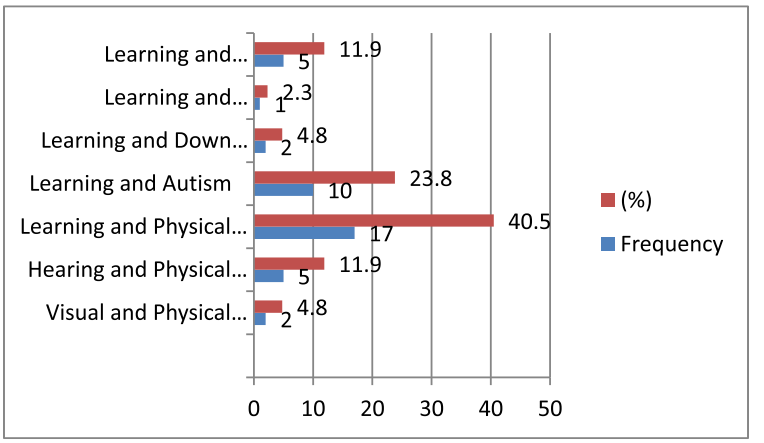

Figure : Multiple Disability Pattern in Schools for Special Needs

Table : Types of Disability of Respondents in Schools of Special Needs

Disability history	FCT (n=273) Frequency (%)		Kwara (n=156) Frequency (%)		Nasarawa (n=71) Frequency (%)		Total (N=500) Frequency (%)	
Visual	30	(10.9)	23	(14.7)	17	(23.9)	70	(14.0)
Hearing	180	(65.9)	118	(75.6)	27	(38.0)	325	(65.0)
Learning	38	(14.0)	7	(4.6)	18	(25.4)	63	(12.6)
Multiple disability	25	(9.2)	8	(5.1)	9	(12.7)	42	(8.4)

Table 3: Disability Pattern of Respondents

Disability pattern	Frequency (%)(N=500)	
Types of Disability		
Visual	72	(14.4)
Hearing	330	(66.0)
Learning	98	(19.6)
Multiple (n=42)		
Physical	24	(57.1)
Autism	10	(23.8)
Down syndrome	2	(4.8)
Hydrocephalus	1	(2.4)
Hyperactivite	5	(11.9)

The longest period of impairment was 39 years, with the mean disability duration from birth being 16.3±4. The majority (55.5%) of the 275 respondents had impairments from birth. Hearing impairment was the most common disability among the respondents' family members, as stated by more than 75% of 397 respondents (79.4%). The majority of respondents' siblings (143, or 28.6%) had a disability, followed by their fathers (133, or 26.6%), and their mothers (121, or 24.2%). (Table 4)

Table 4: Family History of Disability among Respondents in Schools of Special Needs

Disability History	Frequency	(%)
Disability in the Family (n=500)		
Family with disability	397	(79.4)
Family without disability	103	(20.6)
Family with Disability (n=397)		
Fathers	133	(33.5)
Mothers	121	(30.5)
Siblings	143	(36.0)
Father's Disability Types (n=133)		
Visual	26	(19.5)
Hearing	98	(73.7)
Learning	9	(6.8)

Mother's Disability Types (n=121)		
Visual	34	(28.1)
Hearing	78	(64.5)
Learning	9	(7.4)
Sibling Disability Types (n=143)		
Visual	35	(24.5)
Hearing	95	(66.4)
Learning Duration of disability n=500	13	(9.1)
Acquired (disability after birth)		
< 5years	95	(19.0)
≥ 5years	130	(26.0)
Mean duration of disability after birth	7.63	±2.8
Congenital (disability from birth)	275	(55.0)
Mean duration of disability from birth	16.3	±4

DISCUSSION

With a range of 12 to 39 years, the average age of the pupils was 16 years (Table 1). This contrasts with findings from other studies conducted in Malaysia (Sukeri *et al*., 2017) and (D'Angelo *et al.*, 2020), where lower mean ages were reported (10 and 13, respectively). The Nigerian Act (Odirin, 2014) on discrimination against people with disabilities, which did not set an age limit for education but instead gave children with disabilities the opportunity to receive free education up to the secondary school level, may be the cause of the respondents' relatively high average age. Children under the age of 12 were not included in the scope of this study; hence, the minimum age was set at twelve years.

Male students made up more than half of the class. More men participated in an Iranian study of a similar nature (Algood, Harris, & Hong, 2013). The majority of men found in this study may be a result of parents' preference for educating their sons over their daughters. More than one-third of the participants in this study were junior secondary school pupils.

Because Muslims predominate in north-central Nigeria, where the study area was conducted, more than half of the respondents identified as Muslims. The average duration spent in a school was six to eight years, which is within the Nigerian secondary school curriculum; however, this might vary depending on the student population and when they first enrolled (Akinyemi & Isiugo-abanihe, 2014).

The most common sorts of disabilities among students are those affecting their hearing, vision, and learning (Table 2), while some may include physical abnormalities, autism, Down syndrome, hydrocephalus, and ADHD (Table 3). A hearing problem affected almost two-thirds of the kids who were deaf. This result contrasts with that of a Malaysian study (Amar, 2008), where the majority of the pupils had learning disabilities. Learning impairment is the most prevalent form of disability among those who are less fortunate in the school setting (Figure 1), according to a different study conducted in Malaysia (Sukeri *et al.*, 2017) among parents of challenged children. The focus on enhancing care for children with disabilities within nursing curricula is essential. Policymakers must determine the optimal content and training techniques in nursing education to improve knowledge and clinical skills related to caring for these children (Ilkhani, Glasper, & Jarrett, 2016). It is important to highlight that little research has been conducted in the nation to support the categorical proportions of children with various disabilities. However, a study on the prevalence of disabilities conducted in Kwara identified hearing impairment as the most prevalent type of disability (Ologe & Akande, 2003). Another study showed that the combined influence of emotion and behavior among nurses, does not act as a sequential mediator

in the relationship between thoughts-beliefs regarding the disabled and corresponding attitudes (Başalan, 2023)

The distribution of impairment among relatives was investigated throughout the research area. The siblings' patterns of disabilities resembled the students' stated patterns, with hearing impairment being the most common (Table 4). Given that the majority of kids also have a hearing impairment, this is to be expected. The low percentage of learning-disabled kids suggests that the majority of students in special education schools are capable of learning and achieving their educational goals just like ordinary students.

CONCLUSION

In north-central Nigeria, schools evaluated disabled students for special needs. Hearing impairments were identified as the most prevalent major disability in the research area; hence, it is recommended that more special needs schools be developed to give many impaired children who are not in school access to educational opportunities. It is important to access children early enough, which may help reduce the number of children with hearing impairments. More teachers and caregivers specializing in the care of children with hearing impairments should be made available in schools for special needs.

Conflict of Interests

The authors declare that they have no conflict of interests.

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